

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A pneumatic tire for a two-wheeled vehicle, comprising:
 - bead cores embedded in a right and left pair of bead parts;
 - a semi-radial bias carcass layer which extends from one bead part to the other bead part in the shape of a toroid, end portions of which are rolled up around the bead cores to be latched at the bead cores;
 - a radial reinforcement band layer which is disposed only at an inner side of tread ends in a tire width direction, and is disposed at a tire radius direction outer side of a crown part of the semi-radial bias carcass layer, comprising at least one ply at which a plurality of reinforcement cords extending in a radial direction are arranged;
 - a belt layer which is disposed at an outer side of the radial reinforcement band layer in the tire radius direction, comprising at least one belt ply at which a plurality of reinforcement cords are arranged; and
 - a tread layer which is disposed at an outer side of the belt layer in the tire radius direction,
- wherein,
- in the semi-radial bias carcass layer, at least two carcass plies in which a plurality of reinforcement cords extending in a direction of 50 deg to 80 deg with respect to a tire equatorial plane are arranged are provided such that the reinforcement cords of the respective carcass plies

are crossed with each other, and

assuming that the absolute value of the total sum of rigidity components in a circumferential direction of the belt layer is $|\Sigma F_b|$ and the absolute value of the total sum of rigidity components in a width direction of a case made up of the semi-radial bias carcass layer and the radial reinforcement band layer is $|\Sigma F_c|$, $|\Sigma F_b| / |\Sigma F_c| = 1.3$ to 3.0 in a case in which the reinforcement cord constituting the belt layer is a textile cord, and $|\Sigma F_b| / |\Sigma F_c| = 0.03$ to 0.1 in a case in which the reinforcement cord constituting the belt layer is a steel cord,

provided that

$$|\Sigma F_b| \equiv M_{bi} \times N_{bi} \times \cos(\alpha_{bi}) \times \text{number of belt layers (i)}$$

where

M_{bi} : the initial modulus of elasticity at 0.5% elongation for the reinforcement cord constituting the respective belt layers (the unit is cN/dtex for the textile cord, and is kN/mm² for the steel cord)

N_{bi} : end count (cords / cm) for the reinforcement cord constituting the respective belt layers

α_{bi} : inclination angle (deg) with respect to the circumferential direction for the reinforcement cord constituting the respective belt layers

and

$$|\Sigma F_c| = [M_{pi} \times N_{pi} \times \sin(\alpha_{pi}) \times \text{number of the carcass plies}] + [M_{si} \times N_{si} \times \sin(\alpha_{si}) \times \text{number of the radial reinforcement band layers}]$$

where

Mpi: the initial modulus of elasticity (cN/dtex) at 0.5% elongation for the reinforcement cord constituting the carcass ply

Msi: the initial modulus of elasticity (cN/dtex) at 0.5% elongation for the reinforcement cord constituting the radial reinforcement band layer

Npi: end count (cords / cm) for the reinforcement cord constituting the carcass ply

Nsi: end count (cords / cm) for the reinforcement cord constituting the radial reinforcement band layer

α_{pi} : inclination angle (deg) with respect to the circumferential direction for the reinforcement cord constituting the carcass ply

α_{si} : inclination angle (deg) with respect to the circumferential direction for the reinforcement cord constituting the radial reinforcement band layer.

2. (Currently Amended) The pneumatic tire for the two-wheeled vehicle of claim 1, wherein

the reinforcement cord in the carcass layer has the initial modulus of elasticity Mpi of 29 to 56 cN/dtex; the inclination angle ~~α_{pi}~~ of 50 to 80 deg with respect to the circumferential direction; and the end count ~~Np~~Npi of 5 to 13 / cm,

the reinforcement cord in the radial reinforcement band layer has the initial modulus of elasticity ~~Ms~~Msi of 50 cN/dtex or more; the inclination angle ~~α_{si}~~ of 80 to 90 deg with respect to the circumferential direction; and the end count ~~Ns~~Nsi of 8 to 13 / cm, and

the reinforcement cord in the belt layer is the textile cord having the initial modulus of elasticity ~~Mb~~Mbi of 150 cN/dtex or more, or the steel cord having the initial modulus of elasticity

~~Mb~~-Mbi of 8 kN/mm² or more; and has the inclination angle ~~αb~~αbi of 0 to 30 deg with respect to the circumferential direction; and the end count ~~Nb~~-Nbi of 8 to 13 / cm.

3. (previously presented) The pneumatic tire for the two-wheeled vehicle of claim 1, wherein the reinforcement cord in the radial reinforcement band layer has the elasticity higher than that for at least the reinforcement cord in the carcass layer.

4. (previously presented) The pneumatic tire for the two-wheeled vehicle of claim 1, wherein the width of the radial reinforcement band layer is 50 to 90% of a tread periphery width measured along a surface of the tread.

5. (previously presented) The pneumatic tire for the two-wheeled vehicle of claim 1, wherein

the reinforcement cord in the carcass layer is a nylon cord,

the reinforcement cord in the belt layer is an aromatic polyamide cord, and

the reinforcement cord in the radial reinforcement band layer is a rayon cord.

6. (previously presented) The pneumatic tire for the two-wheeled vehicle of claim 1, wherein

the reinforcement cord in the carcass layer is a nylon cord,

the reinforcement cord in the belt layer is a steel cord, and the belt layer is a spiral belt layer which is formed by spirally rolling up the steel cord, and

the radial reinforcement band layer is of a single layer, and the reinforcement cord is an aromatic polyamide cord.